

# **Hanoi Air: Knowledge, Awareness and Sustainable Practices Related to Air Pollution Amongst Hanoi Residents**

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## **Abstract**

This study contributes to the broader sustainability discourse by exploring public knowledge, awareness, and practices regarding air pollution among residents of Hanoi, Vietnam, focusing on its causes, health impacts, and mitigation strategies. A cross-sectional survey was conducted with 521 individuals in suburbs around Hanoi. A multi-stage sampling technique, combining cluster and simple random sampling, was used for participant recruitment. Three central and three suburban districts of Hanoi were randomly selected as clusters. One individual from each household was invited to participate and answer a structured survey, which assessed perceptions of air pollution, its human-induced causes, recognised health impacts, and individual and community-level mitigation behaviours. Nearly all participants (98.3%) were aware of air pollution, with 65.3% attributing it to human activities and 61.2% recognising specific air pollutants as primary contributors. The majority (93.9%) acknowledged health impacts, citing respiratory infections (55.1%) and sinus issues (51.2%) as prevalent concerns. Vulnerable groups, such as children under five (82.3%) and adults over 65 years old (77.4%), were identified as disproportionately affected. Social media (68.9%) and television (58.3%) were the dominant sources of information. Despite recognising the importance of air pollution (98.5%), there was limited engagement in systemic sustainability actions, such as supporting renewable energy initiatives. Most participants (84.3%) reported personal mitigation efforts, including energy-saving practices (35.5%) and walking instead of driving a car or bike (35.3%). While awareness of air pollution and its health impacts is high among Hanoi residents, proactive engagement in systemic solutions remains limited. Policymakers should prioritise community-based programs, public-private partnerships, sustainability education and culturally tailored policy interventions to bridge gaps between awareness and action. Tailored interventions addressing demographic and cultural factors are essential to foster socio-environmental



sustainability in rapidly urbanising contexts.

**Keywords:** Air pollution, Perception, Health impact, Mitigation practice, Vietnam